

Renewables not solve dependence

Green energy can't solve- oil companies have too much sway in government

Engelhardt, 13 (Tom, editor, 11/17/2013 , "One Path Led to Green Energy, the Other to Oil Wars -- Guess Which One We Chose," Huffington Post, http://www.huffingtonpost.com/tom-engelhardt/one-path-led-to-green-ene_b_4293934.html)--CRG

So oil wars, yes! -- which meant transforming the Greater Middle East into a region of chaos, instability, and death. **An oil-ravaged planet, yes indeed!** -- which meant potentially transforming a future version of Earth into a planet of chaos, instability, and death! **A green energy revolution, not on your life! -- not while the giant energy corporations have so much invested in underground reserves of fossil fuels and such gigantic profits to make, not while so many governments are deeply intertwined with those energy giants or are themselves essentially giant energy companies.** No wonder energy expert Michael Klare suggests in his latest piece, "Surviving Climate Change," that it falls into our hands to ensure that a green energy revolution arrives ahead of a human-created, fossil-fueled apocalypse.

No link/Plan doesn't effect

Alt causes – investment and government regulations

Klare, 13 (Michael T., professor of peace and conflict studies at Hampshire College and the author of *The Race for What's Left*, November 17, 2013., "Tomgram: Michael Klare, A Climate Change-Fueled Revolution?," Tomdispatch.com
http://www.tomdispatch.com/post/175773/tomgram%3A_michael_klare%2C_a_climate_change_fueled_revolution/#more)--CRG

Like these earlier upheavals, **a "green revolution" is unlikely to arise from a highly structured political campaign with clearly identified leaders. In all likelihood, it will erupt spontaneously, after a cascade of climate-change induced disasters provokes an outpouring of public fury.** Once ignited, however, **it will undoubtedly ratchet up the pressure for governments to seek broad-ranging, systemic transformations of their energy and climate policies.** In this sense, any such upheaval -- whatever form it takes -- will prove "revolutionary" by seeking policy shifts of such magnitude as to challenge the survival of incumbent governments or force them to enact measures with transformative implications.

Plan doesn't thwart use of renewables- prefer empirical examples of the public's desire for green programs

Klare, 13 (Michael T., professor of peace and conflict studies at Hampshire College and the author of *The Race for What's Left*, November 17, 2013., "Tomgram: Michael Klare, A Climate Change-Fueled Revolution?," Tomdispatch.com
http://www.tomdispatch.com/post/175773/tomgram%3A_michael_klare%2C_a_climate_change_fueled_revolution/#more)--CRG

The same trajectory of events -- **a small-scale environmental protest evolving into a full-scale challenge to governmental authority -- can be seen in other mass protests of recent years. Take a Chinese example:** in October **2012, students and middle class people joined with poor farmers to protest the construction of an \$8.8 billion petrochemical facility in Ningbo**, a city of 3.4 million people south of Shanghai. In a country where environmental pollution has reached nearly unprecedented levels, these protests were touched off by fears that the plant, to be built by the state-owned energy company Sinopec with local government support, would produce paraxylene, a toxic substance used in plastics, paints, and cleaning solvents. Here, too, **the initial spark that led to the protests was small-scale.** On October 22nd, some 200 farmers obstructed a road near the district government's office in an attempt to block the plant's construction. After the police were called in to clear the blockade, students from nearby Ningbo University joined the protests. Using social media, the protestors quickly enlisted support from middle-class residents of the city who converged in their thousands on downtown Ningbo. When riot police moved in to break up the crowds, the protestors fought back, attacking police cars and throwing bricks and water bottles. While the police eventually gained the upper hand after several days of pitched battles, the **Chinese government concluded that mass action of this sort, occurring in the heart of a major city and featuring an alliance of students, farmers, and young professionals, was too great a threat.** After five days of fighting, **the government gave in, announcing the cancellation of the petrochemical project.** The Ningbo demonstrations were hardly the first such upheavals to erupt in China. **They did, however, highlight a growing governmental vulnerability to mass environmental protest.** For decades,

the reigning Chinese Communist Party has justified its monopolistic hold on power by citing its success in generating rapid economic growth. But that growth means the use of ever more fossil fuels and petrochemicals, which, in turn, means increased carbon emissions and disastrous atmospheric pollution, including one “airpocalypse” after another. Until recently, **most Chinese seemed to accept such conditions as the inevitable consequences of growth, but it seems that tolerance of environmental degradation is rapidly diminishing.** As a result, the party finds itself in a terrible bind: it can slow development as a step toward cleaning up the environment, incurring a risk of growing economic discontent, or it can continue its growth-at-all-costs policy, and find itself embroiled in a firestorm of Ningbo-style environmental protests. **This dilemma -- the environment versus the economy -- has proven to be at the heart of similar mass eruptions elsewhere on the planet.**

Governments are too attached to fossil fuels- there will be no renewable adoption- but smart policies like the plan that move away from actions like fracking are a step in the right direction

Klare, 13 (Michael T., professor of peace and conflict studies at Hampshire College and the author of *The Race for What's Left*, November 17, 2013., “Tomgram: Michael Klare, A Climate Change-Fueled Revolution?,” Tomdispatch.com
http://www.tomdispatch.com/post/175773/tomgram%3A_michael_klare%2C_a_climate_change_fueled_revolution/#more)--CRG

What these episodes tell us is that **people around the world are becoming ever more concerned about energy policy as it affects their lives and are prepared -- often on short notice -- to engage in mass protests.** At the same time, **governments globally, with rare exceptions, are deeply wedded to existing energy policies.** These almost invariably turn them into targets, no matter what the original spark for mass opposition. As **the results of climate change become ever more disruptive, government officials will find themselves repeatedly choosing between long-held energy plans and the possibility of losing their grip on power.** Because **few governments are as yet prepared to launch the sorts of efforts that might even begin to effectively address the peril of climate change, they will increasingly be seen as obstacles to essential action and so as entities that need to be removed.** In short, climate rebellion -- spontaneous protests that may at any moment evolve into unquenchable mass movements -- is on the horizon. Faced with such rebellions, recalcitrant governments will respond with some combination of accommodation to popular demands and harsh repression. Many governments will be at risk from such developments, but the Chinese leadership appears to be especially vulnerable. The ruling party has staked its future viability on an endless carbon-fueled growth agenda that is steadily destroying the country's environment. It has already faced half-a-dozen environmental upheavals like the one in Ningbo, and has responded to them by agreeing to protestors' demands or by employing brute force. The question is: How long can this go on? Environmental conditions are bound to worsen, especially as China continues to rely on coal for home heating and electrical power, and yet there is no indication that the ruling Communist Party is prepared to take the radical steps required to significantly reduce domestic coal consumption. This translates into the possibility of mass protests erupting at any time and on a potentially unprecedented scale. And these, in turn, could bring the Party's very survival into question -- a scenario guaranteed to produce immense anxiety among the country's top leaders. **And what about the United States? At this point, it would be ludicrous to say that, as a result of popular disturbances, the nation's political leadership is at any risk of being swept away or even forced to take serious steps to scale back reliance on fossil fuels.** There are,

however, certainly signs of a growing nationwide campaign against aspects of fossil fuel reliance, including vigorous protests against hydraulic fracturing (“fracking”) and the Keystone XL tar sands pipeline. For environmental activist and writer Bill McKibben, all this adds up to an incipient mass movement against the continued consumption of fossil fuels. “In the last few years,” he has written, this movement “has blocked the construction of dozens of coal-fired power plants, fought the oil industry to a draw on the Keystone pipeline, convinced a wide swath of American institutions to divest themselves of their fossil fuel stocks, and challenged practices like mountaintop-removal coal mining and fracking for natural gas.” It may not have achieved the success of the drive for gay marriage, he observed, but it “continues to grow quickly, and it’s starting to claim some victories.” If it’s still too early to gauge the future of this anti-carbon movement, it does seem, at least, to be gaining momentum. In the 2013 elections, for example, three cities in energy-rich Colorado -- Boulder, Fort Collins, and Lafayette -- voted to ban or place moratoriums on fracking within their boundaries, while protests against Keystone XL and similar projects are on the rise. Nobody can say that a green energy revolution is a sure thing, but who can deny that energy-oriented environmental protests in the U.S. and elsewhere have the potential to expand into something far greater? Like China, the United States will experience genuine damage from climate change and its unwavering commitment to fossil fuels in the years ahead. Americans are not, for the most part, passive people. Expect them, like the Chinese, to respond to these perils with increased ire and a determination to alter government policy. So don’t be surprised if that green energy revolution erupts in your neighborhood as part of humanity’s response to the greatest danger we’ve ever faced. If governments won’t take the lead on an imperiled planet, someone will.

US not key

US isn't key- China surpasses us in renewable energy investment- especially because US investment is *falling*. Means plan won't cause the DA's impact

Perkowski, 14 (Jack, Contributor for Forbes, a Wall Street veteran, author, and the founder and Managing Partner of JFP Holdings, Ltd. He is also the former CEO and Chairman of the Board of ASIMCO Technologies, an automotive components company in China, 6/17/2014, "China Leads In Renewable Investment -- Again!," Forbes

<http://www.forbes.com/sites/jackperkowski/2014/06/17/china-leads-in-renewable-investment-again/>--CRG

Every opportunity — and every problem — in China is big! **There is no such thing as a small opportunity, or a small problem, in the world's most populous country. That is certainly true when it comes to environmental and energy issues.** With more cars on the road every year and increasing demands for power from individuals and industrial users alike, **China is fast becoming the world's largest consumer of energy.** In 2013, China's growth in oil consumption accounted for one-third of the world's oil consumption growth. In 2014, China will likely surpass the United States as the world's largest oil importer. China's dependence on imported oil, combined with its well-publicized air-pollution problem, gives the country two big reasons to reduce its dependence on fossil fuels. **The good news is that China recognizes its energy problem and is making big bets on renewable energy.** According to The Global Status Report, which was released earlier this month by the Renewable Energy Policy Network for the 21st Century, **China once again led the rest of the world in renewable energy investment in 2013, spending a total of \$56.3 billion on wind, solar and other renewable projects. The report stated that China accounted for 61 percent of the total investment in renewables by developing countries, and that China invested more in renewable energy than all of Europe last year.** **China's**

continued commitment to renewable energy investment is all the more striking because it came in the face of a global decline in renewable energy investment.

In 2013, global new investment in renewable power and fuels was approximately \$214.4 billion, down 14 percent compared to 2012, and 23 percent lower than the record high in 2011. By way of contrast, China has increased its investment in renewables nearly every year for the past ten years. New renewable power capacity surpassed new fossil fuel and nuclear capacity in China for the first time in 2013. China is now home to about 24 percent of the world's renewable power capacity, including an estimated 260 gigawatts of hydropower. **China's renewable energy investment is part of its 12th Five-Year Plan for Economic and Social Development,** which calls for the country to spend \$473.1 billion on clean energy investments from 2011 to 2015. China's goal is to have 20 percent of its total energy demand sourced from renewable energy by 2020. The Ningxia Hui Autonomous Region in China's interior provides an example of the steps China is taking to develop clean energy.

Alt Causes

Renewables will never be successful regardless of the plan- governments just don't support them

Paddison, 14 (Laura, content manager for Guardian Sustainable Business, Wednesday 16 July 2014, theguardian.com, <http://www.theguardian.com/sustainable-business/investment-renewables-10-things-climate-change>)--CRG

Governments are failing to take up the challenge and lead the way on

renewables. The energy debate has become too politicised, argued EY's Ben Warren, and a lack of cohesive and stable policy has undermined a "long-term view on investment in renewable energy". **Among the problems are skewed tax relief, fossil fuel subsidies and retroactive changes to renewable incentives, which make them risky to investors, panelists said.**

Politicians are also listening to the wrong people, said Bruce Davis of Abundance Generation.

The increasingly vocal lobbying of those with vested interests in slowing the growth of renewables is being heard more than the majority of voters who are in favour.

Investment low

Renewable energy is on a record 2 year low- and doesn't seem to be coming back

Walsh, 14 (Bryan, senior writer for TIME magazine, covering energy and the environment and diseases. Previously the Tokyo bureau chief for TIME, and reported from Hong Kong on health, the environment and the arts, April 7, 2014, "Renewable Energy Investment Is Down—and That's OK," Time Magazine, <http://time.com/51834/renewable-energy-investment/>)--CRG **Funding for solar, wind and other forms of clean power fell 14% in 2013**, largely **because it's now cheaper to adapt to the newer technologies**, but that doesn't mean the shift to renewable energy has fully stopped. On the surface, **the new numbers on the global renewable energy industry in 2013 do not look good for the planet. Investment in renewable energy fell 14% in 2013 to \$214.4 billion, according to a new report from the Frankfurt School-UNEP Collaborating Centre for Climate and Sustainable Energy Finance, the United Nations Environment Programme (UNEP) and Bloomberg New Energy Finance.** And that comes after a year when renewable energy investment was already falling—it's now down 23% from the record investment levels seen in 2011. Given that recent reports from the Intergovernmental Panel on Climate Change (IPCC) underscore the desperate need to increase the shift from fossil fuel to low-carbon power sources like solar or nuclear, **the two-year investment decline is not good news.**

Investment in renewables has decreased in the past 2 years-prefer most recent and qualified evidence

Bloomberg Energy Finance, 14 (Frankfurt School-UNEP Centre/BNEFGlobal, Trends in Renewable Energy Investment Key Findings, Apr 7, 2014, http://fs-unep-centre.org/sites/default/files/attachments/14008nef_visual_12_key_findings.pdf)--CRG **Total investment in renewable power and fuels** (excluding large hydro-electric projects) **fell for the second year running in 2013, reaching \$214 billion worldwide, some 14% lower than in 2012 and 23% below the 2011 record.** The decline reflected a sharp fall in solar system prices, and the effect of policy uncertainty in many countries. **The latter issue also depressed investment in fossil fuel generation in 2013.** If the drop in investment was a cloud, it had several silver linings. One was the sharply reduced cost of solar photovoltaic systems, which meant that a record amount of PV capacity (some 39GW) was constructed in 2013, and for less money than the smaller 2012 total of 31GW. A second silver lining was that 2013 brought a 54% recovery in clean energy share prices, stimulating equity raising by specialist companies on the public markets. A third was that in 2013 cost reductions and efficiency improvements enabled onshore wind and PV projects to be built in a growing number of locations around the world without subsidy support. Wind and PV may be able to out-compete fossil-fuel options as long as there are plentiful local sunshine or wind resources, low capital costs, and no cheap, indigenous coal or gas feedstocks. A fourth was that, renewable energy excluding large hydro made up 43.6% of the new power capacity added in all technologies in 2013 (the same figure as in the previous year), and raised its share of total generation worldwide to 8.5% from 7.8%. Global energy-related CO2 emissions would have been some 1.2 billion tonnes higher but for this contribution. Investment in wind was relatively resilient in 2013, falling just 1% to \$80 billion, while that in solar tumbled 20% to \$114 billion. **Biofuels saw a 26% drop in investment** to \$5

billion, **the lowest for nine years,** while biomass and **waste-to-energy fell 28%** to \$8 billion, and small **hydro-electric** (projects of less than 50MW) **declined 16%** to \$5 billion. Geothermal was the only riser, investment in it gaining 38% to \$2.5 billion. In 2013 also saw an interruption to the previously rising trend of renewable energy investment in developing economies as a whole. After eight years of increases, this fell 14% last year to \$93 billion. Investment in developed economies also retreated 14%, to \$122 billion.

Oil key to economy

Renewables not key to the economy- oil is

API, 12 (API Energy, May 15, 2012, "U.S. OIL SHALE: OUR ECONOMY AND OUR JOBS, http://www.api.org/~media/Files/Oil-and-Natural-Gas/Oil_Shale/Oil_Shale_Factsheet_3.pdf)--CRG

Development of U.S. oil shale resources will generate significant employment opportunities and substantial government revenues. Oil shale production could help reduce the trade deficit and enhance domestic energy security through increased domestic energy production. As the global economy and global demand for liquid fuels have returned to growth, there has been corresponding upward pressure on the costs of petroleum-based transportation fuels . A U.S. oil shale industry can help to mitigate such price increases. With more than 70% of the Western U.S. resource on public lands, **oil shale development can provide a significant and consistent federal revenue stream for decades.'** **A robust U.S. oil shale industry can yield significant economic benefits to our country in the form of taxes and royalty payments.** The U.S. Strategic Unconventional Fuels Task Force estimated that the initial 25-year period of oil **shale production could yield cumulative public sector revenues in excess of \$400 billion.**

TURNS

Reliance on renewables bad-Oil production creates jobs and bolsters American national security. Prevents economic collapse and war with unstable regions of the world

Blackmon, 14 (David, Contributor for Forbes and Managing director of Strategic Communications for FTI Consulting, 2/20/2014, "Oil & Gas Boom 2014: Jobs, Economic Growth And Security," Forbes, <http://www.forbes.com/sites/davidblackmon/2014/02/20/oil-gas-boom-2014-jobs-economic-growth-and-security/>)--CRG

Despite all the climate-based hysteria put out into the public domain in recent weeks attacking the oil and natural gas industry (even the Weather Channel got into that act recently), **three key factors continue to give policymakers pause about acting in ways that would negatively impact the ongoing boom.** Those factors are: **Jobs; Ancillary stimulative impacts on other industries; and National Security.** **The reality for the United States is that the oil and natural gas industry has greatly enhanced the picture around all three of these critical factors in recent years,** nowhere more than in my home state of Texas. **Where jobs are concerned, Texas has consistently outperformed the national economy in terms of job creation and rate of unemployment in every month since the advent of the Great Recession and the discovery of the Eagle Ford Shale play,** both of which took place in October of 2008. Indeed, during the 24 month period from July 2009 through June of 2011, Texas created 49% of all new jobs created in the United States, and the vast majority of those jobs were either directly or indirectly the result of the state's oil and natural gas boom, centered in plays like the Eagle Ford in South Texas, the Permian Basin of West Texas, and the Granite Wash play in the Texas Panhandle. **Nationally, the story is almost as good. Investors Business Daily ran a great piece on February 19 detailing much of the story from a national standpoint. Here is a key excerpt: The oil and gas boom is producing millions of jobs,** and not just where you might expect. **Employment is up 40% in the oil and gas fields since the recession began in late 2007.** **But in every one of the 10**

states where hydrocarbon production is on the rise, overall employment growth has outperformed the nation.

Direct employment in the oil and gas industry rose 40% from 2007 through 2013, as compared to a decline of about 3% in the overall U.S. economy. All the new oil production that has come online since 2008 has reduced oil imports by about 50%, and lower natural gas prices brought about by the boom in supplies of that commodity. This has in turn attracted a rush to invest in new plant and equipment among industries that use petroleum products as feedstocks – think fertilizers, chemicals, plastics, cosmetics and many more – or service or sell products to the industry. IBD points out that more than 100 new plants and factories in a variety of such industries are planned to come online by 2017, and **"When all are up and running, another \$300 billion will be pumped into GDP and 1 million more jobs created."** One industry that is often overlooked in this discussion is **the U.S. shipping industry,** which **is experiencing a boom of its own as demand increases for the ability to move oil** and liquefied natural gas between U.S. ports or overseas. As CNBC pointed out last October, the Jones Act mandates that all goods moved from one U.S. port to another – as much crude oil must be in order to be refined – be carried on vessels that are built and flagged in the United States. U.S. shipbuilders are having a field day attempting to fill this new, growing demand for their products, and according to the U.S. Department of Transportation, are

experiencing their largest boom in more than 2 decades. And the boom cascades on down to the ports that service and supply the ships. About mid-year in 2013, the Port of Houston surpassed the port of New York City to become the nation's top export market. To no one's surprise, this was due mainly to the surge in oil and gas related activity at the port. The Port of Corpus Christi has also seen a similar rapid ramp-up in activity, and now exports almost 400,000 barrels of oil each day overseas and to other U.S. ports. The surge in Corpus Christi has come mainly from light sweet crude produced in the nearby Eagle Ford Shale. **The oil and gas boom has also served to significantly enhance the national security positioning of the United States, reducing the country's dependence on unstable parts of the world, like the Middle East, and enhancing its ability to conduct effective negotiations with hostile nations such as Iran.**

Writing in the March/April issue of Foreign Affairs, Robert D. Blackwell and Meghan L. O'Sullivan do a wonderful job of detailing the myriad ways in which the oil and boom enhances U.S.

standing in the international community, arriving at this conclusion: **The energy boom will add fuel to the country's economic revitalization, and the reduction of its dependence on energy imports will give it some measure of greater diplomatic freedom and influence... the huge boom in U.S. oil and gas production, combined with the country's other enduring sources of military, economic, and cultural strength, should enhance U.S. global leadership in the years to come** — but only if Washington protects the sources of this newfound strength at home and takes advantage of new opportunities to protect its enduring interests abroad. And that is the challenge faced by policymakers at the state and national level: to avoid — to put it in crude terms — screwing all of this newfound opportunity up with misguided policy decisions. **Hysteria mongers** like Ceres, like Bill McKibben, like the Center for Public Integrity, Earthworks and the Center for Biological Diversity **would have our policymakers toss away all of these**

jobs, reject all of this massive economic impact, and toss aside all the strategic advantages the oil and natural gas boom has brought to this country and its people over the last six years. Unfortunately, we see their talking points and fake

'studies' largely parroted without critical examination in much of the nation's news media on a daily basis, a disservice to the public and to policymakers who need real, accurate information in order to make intelligent decisions. Even in Texas, we see these groups becoming increasingly active and getting more attention in the state's media outlets. Those who feel strongly about the need to avoid bad policy decisions that could prematurely end this ongoing boom should get active and communicate your views to your various government representatives. They need to hear from you, because you can rest assured they are hearing from the very loud — if tiny — minority who would kill this boom each and every day. God Bless Texas.

US oil production and energy independence has strengthened the economy- DA reverses that

Laskoski, 13 (Gregg, senior petroleum analyst with GasBuddy.com, Dec. 18, 2013, "The U.S. Oil Boom: The U.S. appears to be in a significantly better position today than it was just a few years ago," US News Report, <http://www.usnews.com/opinion/blogs/economic-intelligence/2013/12/18/us-oil-boom-is-spurring-the-economy>)--CRG

If the Dow Jones Industrial Average, the NASDAQ, and the Standard & Poors 500 Index tell us anything, it's that **the U.S. economy**, despite everything you hear on your local news broadcasts, **is recovering**. If you're uncertain about that, just look at your 401(k) and compare that to where you were four or five years ago. Maybe the improvement comes in spite of government actions

or policies ... we'll leave that debate up to you. Ford Motor Co. announced Dec. 12 that it plans to hire about 5,000 employees in the U.S. in 2014 and that's to implement a plan to launch 16 new vehicles in North America, including the 2015 Mustang and F-Series, and, seven new vehicles in the rest of the world. Four days later General Motors said it was spending \$1.3 billion to upgrade five plants and produce components including a new-generation V-6 engine and a 10-speed transmission. The plants getting the upgrades are located in Detroit, Flint and Romulus, Mich.; Toledo, Ohio and Bedford, Ind. and GM says the spending also will create or retain about 1,000 jobs. It sure looks like they're making these moves because they sense that things are getting better. **There are many positive developments and North America's energy boom may be the greatest of them all. It's an economic catalyst.** That's not hype; that's fact. In

November the International Energy Agency said that by **2015 the U.S. will surpass Saudi Arabia and Russia as the world's biggest oil producer and is on track to become energy self-sufficient in two decades.** It said the U.S. is moving towards meeting all of

its energy needs from domestic resources in 2035. Yes, there's lower cost crude oil coming from the Bakken shale region in North Dakota; lots of it. **The Energy Information Administration says the Bakken crude oil production now exceeds 1 million barrels per day.** And it's flowing from the Permian Basin in Texas and, eventually, the Monterey shale region in California. The Monterey shale in Central and Southern California alone covers two-thirds of the U.S. total estimated shale oil reserves. Its untapped crude oil deposits are estimated at 15.4 billion barrels, more than four times the estimate volume of the Bakken Shale of North Dakota. Of course, all of this crude needs to be able to reach refineries. And we see now that pipeline and rail infrastructure is trying to catch up. Midstream investment in such infrastructure in 2012 (the most recent year available) reached \$26 billion. Sometimes available logistics cause bottlenecks. And refineries often have operational challenges. Of course, we know safety must play a central role in infrastructure development and we saw great disruption following the derailment in Quebec of the Montreal, Maine & Atlantic Railway train that was hauling Bakken crude to the East Coast. While greater safety measures are being implemented, the growth of rail usage is undeniable. We mentioned earlier in the year that the BNSF Railroad hauled 1.3 million barrels of oil in 2008 and that number has grown to 100 million barrels in 2012, with heavy crude. Understandably, many refineries want access to the Canadian and Bakken (heavy sour) crude that often sells at a significant discount to Brent and West Texas Intermediate. Concerning OPEC, we see that the increase in domestic production and increase in crude from Canada, is reducing its clout. **Potentially troubling events in the Middle East, which in the past might have triggered sharp spikes, no longer have the same impact on global crude oil prices – and, indirectly, U.S. gasoline prices – that they once did.** Clearly, 2013 closes with a mixed bag of factors that will shape retail gas prices in 2014. Of course, we would be remiss if we didn't acknowledge that taxes took a bigger bite from our gasoline purchases. In 2013, 19 states plus Washington D.C. increased their tax on gasoline and/or diesel and there's an initiative coming from Oregon to raise the federal gas tax from the current level of 18.4 cents per gallon to 33.4 cents per gallon. While it's true that economic and geopolitical events, weather, and everyday operational issues all have the potential to jolt gas prices, **the U.S. appears to be in a significantly better position today than it was just a few years ago.** We have greater refining capacity and unprecedented supply. But, we'll also address logistics and transportation challenges in getting both crude and finished gasoline to markets. **It's from this context that we should look ahead with optimism and temperance.**

Oil is key to a stable economy- plan key to continue that trend- DA would reverse it

The Economist, 14 (Feb 15th 2014, "Saudi America: The benefits of shale oil are bigger than many Americans realise. Policy has yet to catch up," The Economist.com, <http://www.economist.com/news/united-states/21596553-benefits-shale-oil-are-bigger-many-americans-realise-policy-has-yet-catch>)--CRG

Besides directly creating new jobs and income, the fossil-fuels boom could help growth by reducing America's vulnerability to oil-price swings, in two ways. **First, as production rises and imports shrink, more of the cash that leaves consumers' pockets when the oil price rises will return to American rather than foreign producers.** David Woo of Bank of America/Merrill Lynch notes that America's petroleum deficit has narrowed to 1.7% of GDP while Europe's has widened to nearly 4%, which seems to have made both the dollar and the economy less sensitive to oil prices. **The second channel lies in the economics of shale.** Oil flows relatively easily through the porous rocks that make up a conventional reservoir, so a conventional well can tap a large area. As a result, **the volume of oil pumped each day declines slowly, on average at 6% per year.** By contrast, oil flows much more sluggishly through impermeable tight rock. A well will tap a much smaller area and production declines quite rapidly, typically by 30% a year for the first few years (see chart 2). Maintaining a field's production levels means constant drilling. The International Energy Agency reckons maintaining production at 1m barrels per day in the Bakken requires 2,500 new wells a year; a large conventional field in southern Iraq needs just 60. **This all means that when oil prices rise, producers can quickly drill more holes and ramp up supply. When prices fall, they simply stop drilling, and production soon declines.** In early 2009, after prices collapsed with the global financial crisis, Pioneer shut down all its drilling in the Permian Basin. Within six months, output in the affected areas dropped by 13%. Bob McNally of Rapidan Group, an industry consultant, predicts that America could be "force-marched" back to the stabilising role it played in the 1960s, this time responding to the market's invisible hand rather than government diktat. Will that work in practice? It may already have done so. Since 2008, the Peterson Institute notes, turmoil in Sudan, sanctions on Iran and declining North Sea output have taken a lot of oil off the market. Without America, which accounted for half of the growth in global output over that period, Persian Gulf producers might not have been able to make up for the loss. Prices could have risen sharply, hurting consumers everywhere. Yet they did not. Oil firms try not to over-react to short-term price fluctuations, of course. **Capital, equipment and labour all cost money, so they try to ramp up production only in response to what they think will be long-term shifts in the oil price.**

DA would make US completely oil dependent- that destroys our economy

American Security Project, 10 (bipartisan public policy and research organization dedicated to fostering knowledge and understanding of a range of national security issues, promoting debate about the appropriate use of American power, and cultivating strategic responses to 21st century challenges, May 29, 2010, "U.S. Oil Dependence Threatens Security, Economy, Environment," viewable online at Sierra Club, <http://myscsierra.org/chapter/oil/60-energy/258-oil-dependence-facts.html>)--CRG

TRANSPORTATION: • The U.S. uses nearly 400 million gallons of oil every day moving people in automobiles, goods on freight truck, air travel, rail and transit. • Cars and light trucks use nine million barrels of oil per day. • Of all the oil used in the United States, 70% is consumed by transportation NATIONAL SECURITY: • **Of the imported petroleum Americans consume, 68**

percent is supplied by countries at "high risk" or "very high risk" for instability. • Oil dependence gives leverage and money to potential adversaries, and risking embroiling the U.S. state in endless conflicts abroad to secure access to oil. ECONOMIC SECURITY: •

Americans send over \$1 billion abroad every day to pay for oil. • The result is lost jobs and increasing dollars in the hands of foreigners who we increasingly rely upon to finance our deficits. • The U.S. borrows money from the Chinese to buy oil from the Saudis, causing greater national debt and dependence on the goodwill of others to allow its economy to function.

ENVIRONMENT: • The BP oil disaster in the Gulf of Mexico is an example of what could happen again if the U.S. increases off-shore drilling. • Transportation is responsible for approximately one-third of all U.S. carbon dioxide emissions. • We burn about 400 million gallons of gasoline every day, releasing 19 pounds of carbon dioxide into the atmosphere per gallon, over 7.2 billion pounds of carbon daily. "Every day that we fail to act, is a day that we continue to place American security, economy and climate in jeopardy," said Sierra Club Executive Director Michael Brune. "America can do better – we can end our oil addiction. Indeed, solutions abound already in our great nation."

SOLUTIONS: • **We need to end our oil dependence as**

quickly as possible

. The Environmental Protection Agency's plan to save almost seven million barrels per day of oil in 2030 from transportation shows we can take action starting now and make a down payment on getting off of oil.

Dependence is not zero sum

Dependence is not zero sum- importing is fine as long as it's balanced

AEI, 13 (American Energy Independence, "Journey to Energy Independence,"

<http://www.americanenergyindependence.com/>)--CRG

The United States is a world leader. The nations of the world look to the United States for leadership. **American Energy Independence is about world leadership. A few economists and advocates of global free trade have voiced a narrow view of energy independence, claiming that it will mean a retreat from global economic interdependence, a direction that would disrupt the global free market and lead America toward economic and political isolation.**

Their view is not true. The United States **does not need zero foreign oil imports** to **be energy independent.** There is no reason to end oil imports from Canada and Mexico. **Energy independence is not about protectionism.**

UQ/Dependence low now

Link is not zero sum and the DA is nonuq- America is the largest producer of natural gas and is the most oil dependent it's ever been

The White House, 14 (The White House Official Website, Jun 24, 2014, "Advancing American Energy," <http://www.whitehouse.gov/energy/securing-american-energy>) --CRG

Reducing Our Dependence on Foreign Oil **Our all-of-the-above energy strategy aims to harness American innovation and develop a diverse portfolio of American-made energy. We are safely and responsibly developing our energy resources while advancing cleaner forms of energy, such as natural gas and renewables.**

In November 2013, America hit a milestone of energy independence: **For the first time in nearly two decades, the U.S. produced more oil domestically than it imported from foreign sources. And the U.S. is now the number-one**

natural gas producer in the world. Thanks in part to these initiatives, **America's**

dependence on foreign oil is at a 20-year low — and declining. As we decrease our carbon emissions, our economy continues to grow. Our all-of-the-above approach is advancing our energy independence, supporting American jobs, and building the foundation for a clean-energy economy.

Renewables low- dep on oil for long time

No hope for renewable- civil energy sector is 97% dependent on oil

Black, 12 (Edwin, International investigative author, New York Times best-selling investigative author of IBM and the Holocaust, Internal Combustion, British Petroleum and the Redline Agreement, and The Plan: How to Save America When the Oil Stops -- or the Day Before, 03/19/2012, "Barack Obama Prepares for War Footing," Huffington Post, http://www.huffingtonpost.com/edwin-black/obama-national-defense-resources-preparedness_b_1359715.html)--CRG

Last Friday, March 16, President Barack Obama may have quietly placed the United States on a war preparedness footing, perhaps in anticipation of an outbreak of war between Israel, the West, and Iran. **A newly-propounded Executive Order**, titled "National Defense Resources Preparedness," **renews and updates the president's power to take control of all civil energy supplies, including oil and natural gas, control and restrict all civil transportation, which is almost 97 percent dependent upon oil**; and even provides the option to re-enable a draft in order to achieve both the military and non-military demands of the country, according to a simple reading of the text. The Executive Order was published on the White House website.

Renewables Fail

Renewables fail: they are not economically feasible and the largest CO2 emitters won't switch- and there's no modeling

Lomborg, 13 (Bjørn, editor of *How Much Have Global Problems Cost the World? A Scorecard from 1900 to 2050*, (Cambridge University Press), appearing this month. He is director of the Copenhagen Consensus Center and an adjunct professor at the Copenhagen Business School, November 6, 2013, 12:51am, "We can cut carbon emissions but not with inefficient renewable subsidies," City A.M. <http://www.cityam.com/article/1383699070/we-can-cut-carbon-emissions-not-inefficient-renewable-subsidies>)--CRG

HOPE for a breakthrough at the international climate change talks in Warsaw next week is evergreen: "Where there is a will, there is a way!" the hosts' environment minister says. **But despite this optimism, there is little global will for an overarching agreement akin to the failed Kyoto protocol.** Yet there is a very different option that's not even on the agenda: **instead of pouring more money into still very inefficient renewables, we could make massive but much cheaper investment in research and development into new energy sources.** The world is already spending about \$1bn (£622m) a day on renewables – \$359bn in 2013. \$100bn a year invested worldwide in research & development (R&D) would be hundreds of times more effective, a panel of economists, including three Nobel laureates, found in a Copenhagen Consensus on Climate study. This would increase global R&D 10-fold and cost much, much less -- only 0.2 per cent of global GDP. Unfortunately, this won't happen as long as Warsaw, and numerous other climate summits, persist in hoping for a globally-binding agreement on cutting carbon emissions. This was the essence of the Kyoto protocol, agreed in 1997, but which never really mattered. **Most of the big CO2 emitters had no limits (China and India), or left (the US), or didn't keep their promises (Canada).** Kyoto was dead even when US Vice President Al Gore signed in 1997, and President Bill Clinton said that "the United States has reached an historic agreement with other nations of the world to take unprecedented action to address global warming." The US Senate had already rejected the treaty by 95 to 0 votes. The will has not been there since. After the Durban 2012 talks, and announcements of a legally-binding agreement, India's environment minister Shrimati Jayanthi Natarajan said that "India cannot agree to a legally binding agreement for emissions reduction at this stage of our development." Canada withdrew from Kyoto, which Russia and Japan had already refused to extend. Even full implementation of Kyoto would, by the end of the century, have reduced temperatures by an immeasurable 0.004°C, despite costing about \$200bn annually. Only the EU and a few others remain devoted to significant expenses for tiny outcomes: the EU is committed to cutting carbon emissions by 20 per cent below 1990 levels by 2020. This will, on an average of all the energy-economic models, cost \$250bn a year. By the end of the century (after a total cost of more than \$20 trillion), it will reduce the temperature increase by a tiny 0.05°C. There will be great headlines from Warsaw about pledges, promises and targets. But remember previous breakthroughs. At the Copenhagen summit in 2009, Japan pledged to cut carbon emissions by 25 per cent by 2020. This was impossible – and now they're reneging. China, just before that summit, dramatically promised to cut its carbon intensity (the amount of CO2 emitted for each dollar of GDP) over the next ten years to just 40-45 per cent of its level in 2005. Heroic, but International Energy Agency figures show China was already expected to reduce carbon intensity by 40 per cent without new policies: as its economy develops, China will inevitably shift to less carbon-intensive industries. And remember that, over history, **human civilisation has**

tried to get away from renewables. In 1800, the world got 94 per cent of its energy from renewables, mostly wood and wind. Today it is just 13 per cent. Much of what is classed as renewables means poor people using wood and waste: Africa gets almost 50 per cent of its energy from such sources. But China's renewable energy dropped from 40 per cent in 1971 to 11 per cent today as it became more prosperous. **Rich countries, meanwhile, install wind turbines and solar panels, which emit less CO2 but remain expensive and intermittent.**

Spain now spends almost 1 per cent of its GDP on subsidies for renewables – more than on higher education. **This is not sustainable, and not something most countries want to emulate.** We can't hope to push through a treaty in Warsaw or anywhere else, forcing people to dramatically move to more costly, less reliable energy sources. **Despite all the summits and the hundreds of billions of dollars in subsidies for inefficient green technologies, CO2 emissions have risen by some 57 per cent since 1990.** We need to look at a different approach instead of backing the wrong horse over and over again. The economics show that the smartest long-term solution is to focus on developing green energy. This would push down the costs of future generations of wind, solar and other amazing possibilities.

Renewables are incapable of solving the environment- too many state barriers to make an impact

EPA, 14 (Environmental Protection Agency, 4/2/2014

<http://www.epa.gov/statelocalclimate/state/topics/renewable.html>)--CRG

Price competitiveness is the most obvious barrier to renewable energy installations. In many cases, **barriers to expanding renewable energy are regulatory and therefore within state control.** Some examples include: Utility Rate Structures. **Unfavorable utility rate structures have perennially been a barrier to increased deployment of renewable energy technologies.** Unless carefully monitored to encourage the development of distributed generation, rate structures can increase the cost of renewables (e.g., through stand-by rates, lack of net metering) or completely disallow connection to the electrical grid. Lack of Interconnection Standards. **The absence of standard interconnection rules, or uniform procedures and technical requirements for connecting renewable energy systems to the electric utility's grid, can make it difficult, if not impossible, for renewable systems to connect to the electric utility's grid.** Barriers in Environmental Permitting. **Large-scale renewable energy technologies are subject to all the necessary environmental permits of major industrial facilities.** Renewable energy generation using new technologies can face permitting hurdles until permitting officials are familiar with the environmental effects of the generation processes. Lack of Transmission. **Many renewable resources are located in remote areas that lack ready or cost-effective access to transmission.** States that have not established clear utility regulations that enable investments in transmission to be reimbursable (i.e., cost recovery), nor coordinated planning and permitting processes, slow the development of utility-scale renewable projects in their territory.

Wind Fails

Wind power fails and actually hurts the environment

Earth First, 13 (Website dedicated to supplying information about the environment, originally on Root Force, March 29 2013, "Why Wind Power is a Sham," Earth First, <http://earthfirstjournal.org/newswire/2013/03/29/why-wind-power-is-a-sham/>)--CRG

A series of recently released studies make it clear that wind power is not going to save us—not from global warming, not from high extinction rates, and not from the system of high-energy-consumption industrial exploitation that is killing the planet. Let's start with the most damning findings: **even the most large-scale shift to wind power cannot slow greenhouse gas emissions enough to have any positive effect on the climate, although it may manage to make things worse.** Why? A study published in Nature Climate Change in September found that although hypothetically there is enough power in the earth's winds to sustain current levels of energy consumption, in practice you could never harvest enough energy from wind to affect the climate: **Turbines create drag, or resistance, which removes momentum from the winds and tends to slow them.** As the number of wind turbines increases, the amount of energy that is generated increases. But at some point, **the winds would be slowed so much that adding more turbines will not generate more electricity.** ... [T]he study found that the climate effects of extracting wind energy at the level of current global demand would be small, as long as the **turbines were spread out and not clustered in just a few regions.** At the level of global energy demand, wind turbines might affect surface temperatures by about 0.2 degrees Fahrenheit and affect precipitation by about 1 percent. Overall, **the environmental impacts would not be substantial.** (emphasis added) Another study, published in Nature last month, found that wind farms being constructed in Scotland actually lead to a net increase in carbon dioxide emissions: "Wind farms are typically built on upland sites, where peat soil is common. In Scotland alone, two thirds of all planned onshore wind development is on peatland. England and Wales also have large numbers of current or proposed peatland wind farms. But peat is also a massive store of carbon, described as Europe's equivalent of the tropical rainforest. Peat bogs contain and absorb carbon in the same way as trees and plants — but in much higher quantities. British peatland stores at least 3.2 billion tons of carbon, making it by far the country's most important carbon sink and among the most important in the world. **Wind farms, and the miles of new roads and tracks needed to service them, damage or destroy the peat and cause significant loss of carbon to the atmosphere, where it contributes to climate change.** ... Richard Lindsay of the University of East London, said ... "The world's peatlands have four times the amount of carbon than all the world's rainforests. But they are a Cinderella habitat, completely invisible to decision-makers." Finally, a study published last month in the journal Environmental Research Letters conducted a further analysis on the effects of wind turbine drag: **"Each wind turbine creates behind it a "wind shadow" in which the air has been slowed down by drag on the turbine's blades.** The ideal wind farm strikes a balance, packing as many turbines onto the land as possible, while also spacing them enough to reduce the impact of these wind shadows. But as wind farms grow larger, they start to interact, and the regional-scale wind patterns matter more. **Keith's research has shown that the generating capacity of very large wind power installations** (larger than 100 square kilometers) **may peak at between 0.5 and 1 watts per square meter.** Previous estimates, which ignored the turbines' slowing effect on the wind, had put that figure at between 2 and 7 watts per square meter. In short, we may not have access to as much wind power as scientists thought. ... **"If wind power's going to make a contribution to**

global energy requirements that's serious, 10 or 20 percent or more, then it really has to contribute on the scale of terawatts in the next half-century or less," says Keith. If we were to cover the entire Earth with wind farms, he notes, "the system could potentially generate enormous amounts of power, well in excess of 100 terawatts, **but at that point my guess, based on our climate modeling, is that the effect of that on global winds, and therefore on climate, would be severe — perhaps bigger than the impact of doubling CO2.**" (emphasis added) **As if that weren't enough, another study has just concluded that large wind turbines constructed offshore may snap like matches when hit by medium-size waves: "If we do not take ringing into consideration, offshore wind turbine parks can lead to financial ruin,"** warns John Grue to the research magazine Apollon at University of Oslo. ... Ringing does not just harm wind turbines. Ringing has already been a great problem for the oil industry. The designers of the YME platform did not take ringing into account, and lost NOK 12 billion. **"It is possible to build your way out of the ringing problem by strengthening the oil rigs.** However, **it is not financially profitable to do the same with wind turbines,**" says John Grue." And finally, let's not forget what environmentalists have been warning about for decades: **wind turbines murder birds.** "ReWire has learned that the North Sky River Wind project, which attracted fierce opposition from environmental groups concerned about potential threat to eagles and California condors, was the site of a golden eagle death in January. ... The eagle kill apparently occurred on January 29, just a month after North Sky River started generating power." So what's the solution? Certainly not wind, solar, or any other industrial magic bullet. The solution is to dramatically scale back consumption and shift to local-based economies not dependent upon stealing resources from distant people and lands.

Wind turn- bats

2AC

Wind turbines kill bats

Bird and bat deaths are one of the most controversial biological issues related to wind turbines. The deaths of birds and bats at wind farm sites have raised concerns by fish and wildlife agencies and conservation groups. On the other hand, several large wind facilities have operated for years with only minor impacts on these animals. To try to address this issue, **the wind industry and government agencies have sponsored research into collisions, relevant bird and bat behavior, mitigation measures, and appropriate study design protocols.** In addition, project developers are required to collect data through monitoring efforts at existing and proposed wind energy sites. Careful site selection is needed to minimize fatalities and in some cases additional research may be needed to address bird and bat impact issues. While structures such as smokestacks, lighthouses, tall buildings, and radio and television towers have also been associated with bird and bat kills, **bird and bat mortality is a serious concern for the wind industry.**

Bats key to ecosystems and bio diversity

BCI, 10 (Bat Conservation International, Merlin D. Tuttle, Founder and President Emeritus Bat Conservation International, Based upon a summary, information taken from the article "Bats and Disappearing Wild Bananas," written by Ivan W. Buddenhagen, Professor Emeritus at the University of California at Davis, which appeared in Bat Conservation International's Bats Magazine (vol. 26, no. 4, winter 2008), Dec 26, 2010, <http://www.yearofthebat.org/all-about-bats/bats-and-biodiversity/>)--CRG

Bats contribute more than most people know to the world's eco-systems and a healthy environment. Bats, in fact, are vital to the restoration and enrichment of our eco-systems, including rainforests and other key ecological habitats. Bats also contribute to human health and well-being by performing essential eco-services such as pollination, seed dispersal and insect control. **A wealth of food and drinks, as well as medicines, come to us through the efforts of numerous bat species.** The durian flower, for example, which yields a popular fruit worth more than \$230 million annually in Southeast Asia, would not be able to produce its delicious fruit if flying foxes did not pollinate the lovely durian at dusk. Bats also pollinate wild varieties of bananas. Although seedless and currently not dependent on bats, the commercial bananas we enjoy today co-evolved with bats over thousands of years. Since a single disease could devastate a global banana crop, bats' role in pollinating and dispersing the seeds of this ubiquitous fruit remain important. In a nutshell, fruit bats could keep bananas from disappearing from your favorite market sometime in the near future. **Many of the world's most valuable crop plants rely, as well, on bats: avocados, balsa wood, breadfruit, cashews, carobs, cloves, dates, figs, mangoes and peaches, to name just a few.** More than 450 economically significant plant species are known to depend on bats - and the list in fact may be even longer. Bats pollinate and disperse the seeds of more than 110 plant species used to produce food and drinks and 72 plant species utilized to produce medicines. Bats also perform eco-services for 66 plant species that produce timber, 29 used to fabricate fiber and cordage, 25 needed to create dyes, 19 that make tannins and 11 that render animal feed.* To learn more about eco-system services and how bats help foster human economies, click on the links below. (And check this

page again soon for an in-depth view on "Bats as invaluable allies.") * This summary is based on information taken from the article "Bats and Disappearing Wild Bananas," written by Ivan W. Buddenhagen, Professor Emeritus at the University of California at Davis, which appeared in Bat Conservation International's Bats Magazine (vol. 26, no. 4, winter 2008).

<insert BioD impact>

1AR

Bats are key to the pollination of plants that sustain ecosystems and plants that sustain Asian economic markets

Tuttle, 11 (Dr. Merlin D., an ecologist, award-winning wildlife photographer and leading conservationist who has studied bats and championed their preservation for more than 50 years. He is known worldwide through his scientific discoveries, media appearances, popular articles and photographs, January 20th, 2011, Year of the Bat http://www.yearofthebat.org/_webedit/uploaded-files/All%20Files/TEEB_%E2%80%9CBats%20as%20Invaluable%20Allies%E2%80%A0%20%E2%80%A7%20Bank%20of%20Natural%20Capital.pdf)--CRG

More than 1,200 species of **bats** comprise nearly a quarter of all mammals, and their **ecological services are essential to human economies and the health of whole ecosystems worldwide.**

Without bats, costly crop pests would increase, forcing greater reliance on dangerous pesticides. We could also lose some of our favorite foods and beverages and **suffer the consequences of greatly diminished biodiversity. Many of our most important foods come from bat-dependent plants.** These include bananas, plantain, breadfruit, peaches, mangos, dates, figs, cashews and many more. In fact, in an average tropical food market, **approximately 70 percent of the fruit sold comes from trees or shrubs that rely heavily on bats in the wild.** Some such as the famous durian, still rely on bat pollinators even in commercial orchards. This **king of Asian fruits sells for a billion dollars annually, but could be lost without healthy populations of its bat pollinators.**

Bats are key to the ecosystem and their deaths are human caused

Domfeh, 10 (Kofi Adu, Journalist, Social Entrepreneur, Human Rights Advocate, assisting News Editor at Multimedia Group Limited, August 20, 2010, "Bat ecology in Ghana comes under study," Joy Online, <http://lifestyle.myjoyonline.com/pages/health/201009/52525.ph>)--CRG

Bats provide important ecosystem services by controlling insect populations to the benefit of farmers, as well as maintaining forest health, through the role of bats in dispersing pollen and seed over large distances. However, **bat populations worldwide are declining as a result of human impacts.** According to the scientists, their similarity to humans can help in understanding the dynamics of epidemics such as the common cold. The Kumasi Centre for Collaborative Research in Tropical Research (KCCR) at the KNUST is collaborating with the Ulm University in Germany to study the close relationship between bats and humans. Principal Investigator, Prof. Samuel Oppong tells Luv Fm the project was necessitated by the high-level of human interaction with bats and to look at whether viral transmissions are occurring in the process; "we share living space and we exploit them for food. Bats often roost in very large social groups, comparable to humans living in large cities." According to him, "this project came into being because it's been cited that wild animal species are containers of certain organisms which cause diseases in humans and the SARS [Severe Acute Respiratory Syndrome] epidemic gave an evidence that the disease was actually being carried from a group of bats into man. "From that we have also done some work, which have given evidence that there are many viruses, especially what we call the corona viruses that occur in the bats. "It has become important for us to study the bat because if these bats are known to harbour these viruses and human beings interact with these bats, definitely there might be some transmission from these organisms to

the humans and therefore there is the need to look at the extend of this interaction, the levels of occurrence of these viruses in the animals, so as to determine whether transmission do actually occur and whether some of the diseases that are found in humans, being caused by viruses, are actually coming from transmissions that are coming between bats and humans.” Dr. Thomas Krupper of the University of Ulm says the current three-year phase of the project will investigate the bat ecology in different caves across Ghana and study whether there is a real exchange taking place at the moment between bats and humans. **“It is not very very known how long these bats are living and we have bats living up to 50 years, which is exceptionally long for such a small mammal. So there is a lot of new discovery on the road for us,” he observed** Meanwhile, a GH¢30 reward is being offered for new information on cave locations that can be useful in the study. It is expected that the eco-tourism potentials of communities with bat caves could be exploited when they are identified.

Turn: wind → Terrorism

Wind power is susceptible to terrorism

Marklund, 9 (Liza, consultant and reporter, "Wind power increases vulnerability to terrorism," Nuclear Power Yes Please, Jan 2, 2009, <http://nuclearpoweryesplease.org/blog/2009/01/02/wind-power-increases-vulnerability-to-terrorism/>)—CRG

Wind power increases vulnerability to terrorism Per Ribbing, board member of Sveriges Vindkraftskooperativ, an economic cooperative union promoting wind power, argues that large scale power production such as with nuclear power or coal plants is "yummie" for the world's terrorists. The implication is that distributed power production like wind and solar power is better from a security perspective because terrorists or warmongers cannot knock out every wind turbine and solar panel. He asks us: I have a question... Is it at all possible to wage a war over wind? Who do you invade to control the ocean's waves? Who do you shoot to steal their sun? I know he asked the questions rhetorically, but here are the answers: **"Yes it is"; "the grid operation centers"; "the grid operators". Electrical power is never autonomous. You need a power grid and someone to operate it. This is where the weak spot is. Distributed power production, especially with fickle and unreliable power sources such as wind and solar power, does not increase our resilience against security threats such as terrorism.** On the contrary, wind and solar power makes us more vulnerable. As we showed in our article The day wind power nearly blew out Europe, distributed power production with unreliable sources puts great strain on the networks. **Having to do constant load balancing puts the grid at risk since it was never built to shuffle large amounts of power over great distances.** This means that our weak spots in such a scenario is not the power plants, but the power grid. Take out a few nodes in such a network, and you can cause not just nationwide havoc, but in fact start messing things up for an entire continent. Per Ribbing asks us: What kind of world do you want to build? One where the energy systems have to be constantly protected from terrorists? Again he asked this rhetorically... but here is a lesson in debating Per: don't ask questions for which you may get undesirable answers. **The answer to your question is that reliable large scale power production plants are at least possible to protect, and they do not make our power grid highly vulnerable to evildoers.** As the editors of Barometern.se already concluded: as long as there is a terrorist threat, any kind of critical facility, be they subways, hospitals, aircraft, ferries and so forth, will be at risk. **A wind powered system is not exempt from this because we will still have power network operation centers, network nodes, switch yards, power lines and thousands of other vulnerable points where a terrorist may cause havoc.**

Wind Turn-warming

Increase in wind turbines will add to global warming because CO2 emissions increase in the assembly of turbines

UCS, 13 (Union of Concerned Scientists, website focused primarily on the environment and global warming, made up of scientific experts in their respective fields, 3/5/13, http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/environmental-impacts-wind-power.html) --CRG

While there are no **global warming emissions associated with operating wind turbines, there are emissions associated with other stages of a wind turbine's life-cycle, including materials production, materials transportation, on-site construction and assembly, operation and maintenance, and decommissioning and dismantlement.**

Geothermal bad

Geothermal energy is bad: laundry list of reasons

Stewart, 12 (Carol, energy writer, 'Geothermal energy - Heat from the earth', Te Ara - the Encyclopedia of New Zealand, updated 13-Jul-12, <http://www.teara.govt.nz/en/geothermal-energy/page-1>)--CRG

URL: <http://www.TeAra.govt.nz/en/geothermal-energy/page-1> Depletion of resources **The process of extracting geothermal fluids** (which include gases, steam and water) **for power generation typically removes heat from natural reservoirs at over 10 times their rate of replenishment. This imbalance may be partially improved by injecting waste fluids back into the geothermal system.** Damage to natural geothermal features **Natural features such as hot springs, mud pools, sinter terraces, geysers, fumaroles** (steam vents) and **steaming ground can be easily, and irreparably, damaged** by geothermal development. When the Wairākei geothermal field was tapped for power generation in 1958, the withdrawal of hot fluids from the underground reservoir began to cause long-term changes to the famous Geyser Valley, the nearby Waioara Valley, and the mighty Karapiti blowhole. The ground sagged 3 metres in some places, and hot springs and geysers began to decline and die as the supply of steaming water from below was depleted. In Geyser Valley, one of the first features to vanish was the great Wairākei geyser, which used to play to a height of 42 metres. Subsequently, the famous Champagne Pool, a blue-tinted boiling spring, dwindled away to a faint wisp of steam. In 1965 the Tourist Hotel Corporation tried to restore it by pumping in some three million litres of water, but to no avail. Geyser Valley continued to deteriorate, and in 1973 it was shut down as a tourist spectacle. This story has been repeated many times where there has been geothermal development. Subsidence **Extracting geothermal fluids can reduce the pressure in underground reservoirs and cause the land to sink.** The largest subsidence on record is at Wairākei, where the centre of the subsidence bowl is sinking at a rate of almost half a metre every year. In 2005 the ground was 14 metres lower than it was before the power station was built. As **the ground sinks it also moves sideways and tilts towards the centre. This puts a strain on bores and pipelines, may damage buildings and roads, and can alter surface drainage patterns.** Polluting waterways **Geothermal fluids contain elevated levels of arsenic, mercury, lithium and boron because of the underground contact between hot fluids and rocks.** If waste is released into rivers or lakes instead of being injected into the geothermal field, **these pollutants can damage aquatic life and make the water unsafe for drinking or irrigation.** A serious environmental effect of the geothermal industry is arsenic pollution. Levels of arsenic in the Waikato River almost always exceed the World Health Organisation standard for drinking water of 0.01 parts per million. Most of the arsenic comes from geothermal waste water discharged from the Wairākei power station. **Natural features such as hot springs are also a source of arsenic, but it tends to be removed from the water as colourful mineral precipitates like bright red realgar and yellowy green orpiment.**

Geothermal is impractical and won't ever be wide spread- meaning it can't solve the DA's impacts

CEF, 11 (Conserve Energy Future, Jul 28, 2011, "Disadvantages Of Geothermal Energy," http://www.conserve-energy-future.com/Disadvantages_GeothermalEnergy.php)--CRG

1. Not Widespread Source of Energy : **Since this type of energy is not widely used therefore the unavailability of equipment, staff, infrastructure, training pose hindrance to the installation of geothermal plants across the globe. Not enough skilled manpower and availability of suitable build location pose serious problem in adopting geothermal energy globally.** 2. High

Installation Costs : To get **geothermal energy, requires installation of power plants**, to get steam from deep within the earth and this require huge one time investment and require to hire a certified installer and skilled staff needs to be recruited and relocated to plant location.

Moreover, electricity towers, **stations need to set up to move the power from geothermal plant to consumer.** 3. Can Run Out Of Steam : **Geothermal sites can run out of steam over a period of time due to drop in temperature or if too much water is injected to cool the rocks and this may result huge loss for the companies which have invested heavily in these plants.**

Due to this factor, companies have to do extensive initial research before setting up the plant. 4. Suited To Particular Region : **It is only suitable for regions which have hot rocks below the earth and can produce steam over a long period of time.** For this great research is required

which is done by the companies before setting up the plant and this initial cost runs up the bill in setting up the geothermal power plant. Some of these regions are near hilly areas or high up in mountains. 5. May Release Harmful Gases : **Geothermal sites may contain some poisonous gases and they can escape deep within the earth, through the holes drilled by the constructors.**

The geothermal plant must therefore be capable enough to contain these harmful and toxic gases. 6. Transportation : **Geothermal Energy can not be easily transported.** Once the tapped energy is extracted, it can be only used in the surrounding areas. Other sources of energy like wood, coal or oil can be transported to residential areas but this is not a case with geothermal energy. Also, there is a fear of toxic substances getting released into the atmosphere.

Emperically proven that geothermal fails- no matter how much investment there is geothermal projects are shut down for fear of earthquakes and damage

Moseman, 9 (Andrew, Energy consultant, December 14, 2009, "Bad News for Geothermal Energy: Two Major Projects Bite the Dust," Discover, <http://blogs.discovermagazine.com/80beats/2009/12/14/bad-news-for-geothermal-energy-two-major-projects-bite-the-dust/#.U92FdoBdVe8>)--CRG

Dreams that major geothermal energy plants could power our future took a major hit last week, as worries over earthquakes and technical failures killed two ambitious projects in consecutive days. The two projects both hoped to harvest the heat of deeply buried bedrock by drilling down, fracturing the rock, and then circulating water through the fissures to produce steam that could drive turbines. First, on Thursday, **the \$60 million plan to tap geothermal energy beneath Basel, Switzerland, died for good after a Swiss government study said it would cause millions of dollars in damage through earthquakes each year.** The project, led by Markus O. Häring, a former oilman, was suspended in late 2006 after it generated earthquakes that did no bodily harm but caused about \$9 million in mostly minor damage to homes and other structures. Mr. Häring is to go to trial next week on criminal charges stemming from the project [The New York Times]. **The Swiss project required drilling more than 16,000 feet into the ground, and would have provided electricity to 10,000 homes.** But the government's report

stated that the region could see as many as 170 earthquakes during the project's 30-year lifespan, including 30 during just the first phase of drilling, though most would be minor. The United States' geothermal hopes suffered, too, as the AltaRock project located north of San Francisco announced on Friday that it will shut down, despite **extensive financial**

support. In addition to a \$6 million grant from the Energy Department, AltaRock had attracted some \$30 million in venture capital from high-profile investors like Google, Khosla Ventures and Kleiner Perkins Caufield & Byers [The New York Times]. AltaRock broke drill bits while trying to tap deep rock, and annoyed and worried nearby California residents with its earthquake potential.

Solar Bad

Solar doesn't solve their impacts- ends up admitting GHGs

Duerrss, 13 (Roxana Isabel, Consultant energy expert with DW Academia, 04.06.2013, Despite bright potential, solar power struggles to stay 'clean', DW Academia, <http://www.dw.de/despite-bright-potential-solar-power-struggles-to-stay-clean/a-16858170>)--CRG

Not so clean production? Indeed, solar energy is considered as one of the most environmentally-friendly sources of energy. It's a decentralized system, and the source of the energy – the sun – is both free and limitless. It's no surprise, then, that photovoltaics is believed to be the best energy investment for the future. The Federal Environment Agency in Germany has called photovoltaics a "very environmentally-friendly technology" because no emissions are created as it works. **But PV's green credentials are more complex than meets the eye. Much depends on the kind of energy used during the production process. If solar panels are**

manufactured using electricity from coal-burning plants, they indirectly emit

greenhouse gas emissions. That makes them less clean than a panel that's manufactured using renewable energy.

Solar power is impractical and will not be adopted

Sherwood, 10 (Chris, Consultant, May 23, 2010, "Bad Things About Solar Panels," Livestrong.com, <http://www.livestrong.com/article/129740-bad-things-solar-panels/>)--CRG

Cost The installation cost for solar power is one disadvantage. The overall cost of a panel system is dependent on how much energy, measured in watts, your home or business needs and how much direct sunlight the structure receives in a typical year. Total installation costs can start around \$15,000 and range well past \$40,000, depending on the home, and whether you install the system yourself or have it installed by a professional. Rebates and incentives are available that may reduce the overall cost of the system, the U.S. Department of Energy notes. Weather **Another disadvantage is solar panels' dependence on the weather. The more direct sunlight a solar panel receives, the more power it can generate.** When the weather becomes cloudy, the output of the panels is dramatically decreased. Areas of the United States like Arizona have a definite advantage in solar power over areas such as Seattle that spend much of the year under rain clouds. Surroundings **Solar panels also are affected by the surrounding environment.** For example, trees and other homes or businesses can block the sunlight, reducing the panels' output. Even if your home is relatively open to sunlight during installation, unexpected future developments of homes or commercial property can quickly put a damper on your solar investment. Space **The amount of space needed at your home for the installation of solar panels can also be a disadvantage.** Solar panels need a relatively large amount of surface area in order to collect power. These large panels mixed with the other components of the system can take up a disproportionate amount of space at a small home. Maintenance **Because solar power is relatively new, maintenance of your panels can also be a problem. Outside of basic solar panel maintenance, repair of your panels must be performed by a certified photovoltaic energy technician.** Finding such a technician and paying for a service call can be costly.